

Partner : _____

AGILE

RESPONSIVE

LETHAL

VERSATILE

SURVIVABLE

DEPLOYABLE

SUSTAINABLE

AUTOMOTIVE RESEARCH CENTER



AUTOMOTIVE RESEARCH CENTER

The Automotive Research Center (ARC), established in 1994 at the University of Michigan, is a university-based U.S. Army Center of Excellence for the development of advanced technology for high fidelity simulation of military and civilian ground vehicles.

The goal of the research conducted at the ARC is to develop a distributed simulation and design environment for ground vehicles that allows simulation tasks to be tailored to required applications and design needs. Researchers are working in five areas:

- Advanced and hybrid powertrains
- High performance structures and materials
- Integrated system design and simulation
- Intelligent vehicle dynamics and control
- Synthetic and virtual environments

ARC activities support:

- Vehicle design objectives of versatility, high mobility, modularity, and low cost;
- Linkage of automotive suppliers with OEMs and the military in the product development phase; and
- Education of the highly qualified technical personnel necessary to design and support future vehicle products.

ARC research offers significant benefits to the Army. For example, the Center has been able to advance the state of the Army's ground vehicle systems, improve the efficiency of vehicle design and the design assessment process, and maximize the use of advanced design and simulation software to lower development costs. Most importantly, the ARC has served as the catalyst between military and commercial ground vehicle OEMs and suppliers that has resulted in a synergistic approach to advancing simulation technology.

The ARC is the key research partner of the U.S. Army TACOM National Automotive Center in Warren, Michigan. In addition to the University of Michigan, the Center maintains partnerships with Clemson University, Oakland University,

University of Alaska-Fairbanks, University of Iowa, University of Tennessee, University of Wisconsin-Madison, and Wayne State University.

Critical to the success of the Center is the effective exchange of needs and findings, which is accomplished through the following joint efforts of government, industry, and the academic community:

- Each project has a team consisting of principal technical members from government, industry, faculty, and the educational research community, known as the Quad concept;
- Advisory board meetings with representatives from leading industrial organizations; and
- Annual conferences that provide an avenue to highlight the exchange of research advancements and stimulate ideas and future interest in meeting national challenges.

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